

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Aslam Jaffery on December 7, 2010, and Greg Coldwell on January 5, 2011.

The application has been amended as follows:

**15.** A multi-service monitoring system comprising:

computer server systems having a cluster of application servers communicatively coupled on a computer network to serve software application over the computer network to a plurality of computer client systems, wherein each computer server system including an application server having:

an administration service to generate runtime management beans ("MBeans"), wherein each runtime MBean is associated with one or more resources such that each runtime MBean serves as an intermediary between its one or more associated resources and a corresponding monitor MBean of monitor MBeans that seeks monitoring data relating to the one or more resources, each runtime MBean collecting monitoring data relating to the one or more associated resources and reporting the monitoring data to the corresponding monitor MBean, wherein each monitor MBean to actively receive the monitoring data from a corresponding runtime MBean via active instrumentation, wherein the active instrumentation is performed upon occurrence of a specified event associated with the one or more resources; and

a monitor service in communication with the administration service, the monitor service to generate the monitor MBeans, each monitor MBean being directly mapped to a corresponding runtime MBean and indirectly mapped to a resource associated with the corresponding runtime MBean, and each monitor MBean having a resource identifier to identify its corresponding runtime MBean;

wherein each computer server system including an application server further having:  
a notification server to generate notifications in response to occurrence of one or more  
specified events relating to one or more runtime MBeans or one or more monitor MBeans, the  
notification service providing the notifications to each application server in the cluster of  
application servers.

**15.** Cancel.

**30.** A method comprising:

communicatively coupling a cluster of application servers on a network to serve software applications over the network to a plurality of clients;

generating runtime management beans ("MBeans"), wherein each runtime MBean is associated with one or more resources such that each runtime MBean serves as an intermediary between its one or more associated resources and a corresponding monitor MBean of monitor MBeans that seeks monitoring data relating to the one or more resources, each runtime MBean collecting monitoring data relating to the one or more associated resources and reporting the monitoring data to the corresponding monitor MBean, wherein each monitor MBean to actively receive the monitoring data from a corresponding runtime MBean via active instrumentation,

wherein the active instrumentation is performed upon occurrence of a specified event associated with the one or more resources;

generating the monitor MBeans, each monitor MBean being directly mapped to a corresponding runtime MBean and indirectly mapped to a resource associated with the corresponding runtime MBean, and each monitor MBean having a resource identifier to identify its corresponding runtime MBean; and

generating notifications in response to occurrence of one or more specified events relating to one or more runtime MBeans or one or more monitor MBeans, the notification service providing the notifications to each application server of the cluster of application servers.

**31.** Cancel.

**36.** A non-transitory machine-readable storage medium comprising instructions which, when executed, cause a machine to:

communicatively couple a cluster of application servers on a network to serve software applications over the network to a plurality of clients, each of the application servers comprising server nodes;

generate runtime management beans ("MBeans"), wherein each runtime MBean is associated with one or more resources such that each runtime MBean serves as an intermediary between its one or more associated resources and a corresponding monitor MBean of monitor MBeans that seeks monitoring data relating to the one or more resources, each runtime MBean collecting monitoring data relating to the one or more associated resources and reporting the monitoring data to the corresponding monitor MBean, wherein each monitor MBean to actively receive the monitoring data from a corresponding runtime MBean via active instrumentation,

wherein the active instrumentation is performed upon occurrence of a specified event associated with the one or more resources; and

generate the monitor MBeans, each monitor MBean being directly mapped to a corresponding runtime MBean and indirectly mapped to a resource associated with the corresponding runtime MBean, and each monitor MBean having a resource identifier to identify its corresponding runtime MBean,

wherein the instructions which, when executed, further cause the machine to:

generate notifications in response to occurrence of one or more specified events relating to one or more runtime MBeans or one or more monitor MBeans, the notification service providing the notifications to each application server of the cluster of application servers.

**37.** Cancel.

**39.** Change "The tangible" in line 1 to "The non-transitory".

**41.** Change "The tangible" in line 1 to "The non-transitory".

**52.** Change "The system as in claim 16" in line 1 to "The system as in claim 15".

**55.** Change "The method as in claim 31" in line 1 to "The method as in claim 30".

**57.** Change "The tangible" in line 1 to "The non-transitory".

**58.** Change "The tangible machine-readable storage medium as in claim 37" in line 1 to "The non-transitory machine-readable storage medium as in claim 36".

**59.** Change "The tangible" in line 1 to "The non-transitory".

**Allowable Subject Matter**

2. Claims 15, 18, 20, 30, 32, 35, 36, 39, 41, 44-45, 48, and 51-59 are allowed.

The following is an examiner's statement of reasons for allowance:

Claims are considered allowable when reading the claims none of the references of record alone or in combination, in light of the specification, disclose or suggest the combination limitations specified in the independent claims including each monitor MBean being directly mapped to a corresponding runtime MBean and indirectly mapped to a resource associated with the corresponding runtime MBean, and each monitor MBean having a resource identifier to identify its corresponding runtime MBean, wherein each computer server system including an application server further having a notification server to generate notifications in response to occurrence of one or more specified events relating to one or more runtime MBeans or one or more monitor MBeans, the notification service providing the notifications to each application server in the cluster of application servers.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Van Kim T. Nguyen whose telephone number is 571-272-3073. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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